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Abstract

[SANTOS-DAROZ, Claudia Batitucci dos](#) et al. Bond strength of a resin cement to dentin using the resin coating technique. *Braz. oral res.* [online]. 2008, vol.22, n.3, pp. 198-204. ISSN 1806-8324. doi: 10.1590/S1806-83242008000300002.

The aim of this study was to evaluate the bond strength of a resin cement to dentin using different adhesive systems (AS) in the presence or absence of a low-viscosity composite liner (Protect Liner F - PLF) applied over the bonded dentin. The adhesive systems selected were: AdheSE/Vivadent (AD); Clearfil Protect Bond/Kuraray (CP); One-Up Bond F/Tokuyama (OU); Single Bond/3M ESPE (SB); Tyrian SPE/One-Step Plus/Bisco (TY); Xeno III/Dentsply (XE) and Unifil Bond/GC (UN). After removing the labial and lingual enamel surfaces of bovine incisors, dentin fragments were prepared and randomly divided into 15 groups ($n = 8$). The dentin substrates were bonded with the AS and the PLF was applied or not before application of the resin cement (Panavia F, Kuraray). In the control group, the ED Primer (ED) and the resin cement without PLF were used. The AS, PLF and resin cement tested were used according to the manufacturers' instructions, and all treated dentin surfaces were temporized. After water storage for one week, three cylinders of resin cement were applied to each bonded dentin surface, using tygon tubing molds. The specimens were subjected to micro-shear testing and the data were statistically analyzed (two-way ANOVA, Tukey and Dunnett tests, $p < 0.05$). The observed mean shear bond strengths in MPa were: ED: 20.2 ± 2.3 ; AD: 30.3 ± 6.5 ; CP: 25.3 ± 4.4 ; OU: 28.3 ± 6.6 ; SB: 25.6 ± 6.9 ; TY: 24.5 ± 2.5 ; XE: 17.3 ± 3.4 ; UN: 28.4 ± 6.2 ; AD+PLF: 32.8 ± 4.1 ; CP+PLF: 29.9 ± 3.9 ; OU+PLF: 34.1 ± 4.1 ; SB+PLF: 29.5 ± 8.2 ; TY+PLF: 29.2 ± 3.9 ; XE+PLF: 32.8 ± 6.7 ; UN+PLF: 32.2 ± 4.5 . The bond strength of the resin cement to dentin using the tested AS was increased when the low-viscosity composite liner was applied.

Keywords : Dentin-bonding agents; Dentin; Shear strength; Composite resins.

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